

Commonwealth of Kentucky
Natural Resources and Environmental Protection Cabinet
Department for Environmental Protection
Division for Air Quality
803 Schenkel Lane
Frankfort, Kentucky 40601
(502) 573-3382

STATE ORIGIN
AIR QUALITY PERMIT

Permittee Name: CDR Pigments & Dispersions, (a Division of Flint Ink North America Corporation)
Mailing Address: 305 Ring Road , Elizabethtown, Kentucky 42701
Source Name: Same as above
Mailing Address: Same as above
Source Location: Same as above
KYEIS ID #: 021-093-00046
SIC Code: 2865
Regional Office Frankfort Regional Office
643 Teton Trail, Suite #B
Frankfort, KY 40601
(502) 564-3358
County: Hardin
Permit Number: S-02-033
Log Number: 54397
Permit Type: Minor Construction/Operating
Application Complete Date: March 01, 2002
Issuance Date: April 25, 2002
Expiration Date: April 25, 2012

John S. Lyons, Director
Division for Air Quality

SECTION A - PERMIT AUTHORIZATION

Pursuant to a duly submitted application the Kentucky Division for Air Quality hereby authorizes the operation of the equipment described herein in accordance with the terms and conditions of this permit.

This permit has been issued under the provisions of Kentucky Revised Statutes Chapter 224 and regulations promulgated pursuant thereto.

The permittee shall not construct, reconstruct, or modify an affected facility without first having submitted a complete application and receiving a permit for the planned activity from the Division, except as provided in this permit or in 401 KAR 52:040, State-origin permits.

Issuance of this permit does not relieve the permittee from the responsibility of obtaining other permits, licenses, or approvals that may be required by the Cabinet or other federal, state, or local agencies.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

Group Number: **01** **Clay Base Mixer**

Process Number: 01 Clay Base Mixer

Description:

Affected facility	Clay Base Mixer
Maximum capacity of the system	7.5 tons per hour
Control Equipment (Filter) Efficiency	95%
Year of installation of system	1/1/1985

Group Number: **05(06)** **Carbon Black Unloading**

Process Number: 05(06) Carbon Black Unloading

Description:

Affected facility	Unloading
Maximum capacity of the system	7.0 tons per hour
Control Equipment (Bin Filter) Efficiency	99.9%
Year of installation of system	4/9/1982

Group Number: **16(11H)** **Strike Tanks**

Process Number: 16(11H) Strike Tanks

Description:

Affected facility	Strike Tanks
Maximum capacity of the system	13.0 tons per hour
Control Equipment (scrubber) Efficiency	98%
Year of installation of system	3/26/1985

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

Group Number:	23(16)	AZO Pulverizing & Pneumatic Conveying
Process Number:	23(16)	AZO Pulverizing & Pneumatic Conveying

Description:

Affected facility	AZO Pulverizing
Maximum capacity of the system	0.25 tons per hour
Control Equipment (Baghouse) Efficiency	99.9%
Year of installation of system	3/26/1985

APPLICABLE REGULATIONS: **401 KAR 59:010**, New Process Operations, applies to the emissions of particulate matter.

1. Operating Limitations: **None**

2. Emission Limitations:

- 401AR 59:010, Sec. 3:** The permittee shall not cause, suffer, allow, or permit any continuous emission into the open air from a control device or stack associated with any affected facility which is equal to or greater than twenty (20) percent opacity.
- 401 KAR 59:010 Section 3(2), for emissions from a control device or stack no person shall cause, suffer, allow or permit the emission into the open air of particulate matter (PM) from any affected facility which in excess of the quantity described below:

$$E = 3.59(P)^{0.62}$$

E = the PM emissions rate (pounds/hour)

P = the process rate (tons/hour)

Compliance Demonstration Method:**a. Mass Emission Standard:**

Actual PM Emission Rate = [Amount of PM containing material per month] x **Emission factor as listed in** Kentucky Emissions Inventory) (in pounds PM/per ton of material processed)] ÷ [Total hours of material processed during the month]

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

b. Opacity Limit:

During periods of normal operation of the control equipment no compliance demonstration is necessary.

c. Use of Control Equipment:

The permittee shall record the occurrence, duration, cause, and any corrective action taken for each incident when the facility is in operation but the corresponding control equipment is not in operation.

3. Testing Requirements:

Pursuant to Regulations 401 KAR 59:005, Section 2(2) and 401 KAR 50:045, Section 1, performance testing using the Reference Methods specified in Regulation 401 KAR 50:015 shall be conducted as required by the Division.

4. Specific Monitoring Requirements:

The permittee shall monitor the following parameters:

- a. Total weight of PM containing material each month.
- b. Total hours of processing during the month.
- c. The permittee shall visually inspect the control equipment once per week. The weekly inspection shall consist of a visual inspection of the physical condition of the external unit, combined with the corresponding visual emissions observation as outlined below:

- (1) Whether any air emissions were visible from any individual stack;
- (2) All emission points from which visible emissions were observed;
- (3) Whether the visible emissions were normal for the stack.

If no visible emissions are observed then no further observations are required.

- d. If visible emissions are observed during a survey, the permittee shall perform one of the following:
 - (1) The permittee shall perform a Method 9 reading for emission points of concern. The opacity observed shall be recorded in the daily log. The reading shall be performed by a representative of the permittee certified in Visible Emissions Evaluations. The permittee shall maintain a list of all individuals that are certified Visible Emissions Evaluators and the date of certification; or
 - (2) The permittee shall observe and record in the weekly log the following information:
 - i. The color of the emissions;
 - ii. Whether the emissions were light or heavy;
 - iii. The total duration of the visible emission incident;
 - iv. The cause of the abnormal emissions; and
 - v. Any corrective actions taken.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

5. Specific Recordkeeping Requirements:

The permittee shall maintain records of the following information:

- a. Total weight of PM containing material processed each month.
- b. Total hours of processing during the month.
- c. All maintenance activities performed at the control equipment.
- d. See the Monitoring Requirement above.

6. Specific Reporting Requirements:

None

7. Specific Control Equipment Operating Conditions:

The control equipment associated with the processes shall control emissions of particulate matter and be operated properly in accordance with manufacturer's specifications and/or standard operating procedures at all times when the processes are in operation.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

Group Number: 021(14) **Pigment Dryer**

Process Number: 021 Dryer

Description:

One (1) pigment dryer

Construction Date: 3/26/1985

Primary fuel: Natural Gas

Maximum rated capacity: 7.0 mmBTU/hr

Group Number: 025(18) **Boiler**

Process Number: 025 Boiler

Description:

One (1) boiler

Construction Date: 3/26/1985

Primary fuel: Natural Gas

Backup fuel: Fuel Oil #2

Maximum rated capacity: 35.0 mmBTU/hr

Group Number: 026(22) **Heater**

Process Number: 026 Heater

Description:

One (1) heater

Construction Date: 5/2/1985

Fuel: Natural Gas

Maximum rated capacity: 7.0 mmBTU/hr

Group Number: 032(26) **Boiler**

Process Number: 032(26) Boiler

Description:

One (1) boiler

Construction Date: 7/15/1987

Primary fuel: Natural Gas

Backup fuel: Fuel Oil #2

Maximum rated capacity: 35.0 mmBTU/hr

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS**APPLICABLE REGULATIONS:**

401 KAR 59:015, New indirect fired heat exchangers, applies to the particulate matter and sulfur dioxide emissions from the combustion of natural gas and fuel oil.

1. Operating Limitations:

None

2. Emission Limitations:

- a. Pursuant to 401 KAR 59:015, Section 4(1)(c), emissions of particulate matter from the combustion of either natural gas or fuel oil shall not exceed the following:

Emission Point	Allowable
021	0.34 lb/mmBTU
025	0.34 lb/mmBTU
026	0.34 lb/mmBTU
032	0.34 lb/mmBTU

- b. Pursuant to 401 KAR 59:015, Section 4(2), the opacity of visible emissions from the combustion of either natural gas or fuel oil shall not exceed 20%.
- c. Pursuant to 401 KAR 59:015, Section 5(1)(c)1, emissions of sulfur dioxide from the combustion of either natural gas or fuel oil shall not exceed the following:

Emission Point	Allowable
021	1.25 lb/mmBTU
025	1.25 lb/mmBTU
026	1.25 lb/mmBTU
032	1.25 lb/mmBTU

Compliance Demonstration Method:**1. Particulate Matter and Sulfur Dioxide Emissions:**

Emissions in lbs./mmBTU =
$$\frac{[(\text{Monthly gas or fuel oil consumption rate} \times \text{Emission factor listed in Kentucky Emissions Inventory}) / (\text{Hours of operation per month} \times \text{Hourly Rated Capacity})]}{}$$

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS**Compliance Demonstration Method:****2. Opacity:****a. Natural Gas:**

The opacity is assumed to be in compliance with the opacity limit while burning Natural Gas and during normal operation.

b. Fuel Oil:

Once per calendar day while burning fuel oil, the permittee shall survey the stacks for visible emissions and maintain a daily log noting the following information:

- (1) Whether any air emissions were visible from any individual stack;
- (2) All emission points from which visible emissions were observed;
- (3) Whether the visible emissions were normal for the boiler or stack.

If no visible emissions are observed then no further observations are required.

If visible emissions are observed during a survey, the permittee shall perform one of the following:

- (1) The permittee shall perform a Method 9 reading for emission points of concern. The opacity observed shall be recorded in the daily log. The reading shall be performed by a representative of the permittee certified in Visible Emissions Evaluations. The permittee shall maintain a list of all individuals that are certified Visible Emissions Evaluators and the date of certification; or
- (2) The permittee shall observe and record in the daily log the following information:
 - i. The color of the emissions;
 - ii. Whether the emissions were light or heavy;
 - iii. The total duration of the visible emission incident;
 - iv. The cause of the abnormal emissions; and
 - v. Any corrective actions taken.

3. Testing Requirements:

Pursuant to 401 KAR 59:005 Section 2(2) and 401 KAR 50:045, Section 1, performance testing using the Reference Methods specified in 401 KAR 50:015 shall be conducted as required by the division.

4. Specific Monitoring Requirements:

The permittee shall monitor and maintain records of the following information:

- a. The monthly fuel usage rate (cubic feet/month or gallons per month) for each of the fuel listed herein.
- b. The monthly hours of operation (hours operated per month) of the boilers heater and dryer.
- c. The sulfur content of each type of fuel burned. The sulfur content maybe determined by fuel sampling and analysis or by fuel supplier certification.

5. Specific Record keeping Requirements:

See Specific Monitoring Requirements above.

6. Specific Reporting Requirements:

None

7. Specific Control Equipment Operating Conditions:

None

SECTION C - GENERAL CONDITIONS

A. Administrative Requirements

1. The permittee shall comply with all conditions of this permit. Noncompliance shall be a violation of 401 KAR 52:040, Section 3(1)(b) and is grounds for enforcement action including but not limited to the termination, revocation and reissuance, or revision of this permit.
2. This permit shall remain in effect for a fixed term of ten (10) years following the original date of issue. Permit expiration shall terminate the source's right to operate unless a timely and complete renewal application has been submitted to the Division at least six months prior to the expiration date of the permit. Upon a timely and complete submittal, the authorization to operate within the terms and conditions of this permit, including any permit shield, shall remain in effect beyond the expiration date, until the renewal permit is issued or denied by the Division. [401 KAR 52:040, Section 15]
3. Any condition or portion of this permit which becomes suspended or is ruled invalid as a result of any legal or other action shall not invalidate any other portion or condition of this permit.
[Material incorporated by reference by 401 KAR 52:040, Section 1a, 11]
4. Pursuant to materials incorporated by reference by 401 KAR 52:040, this permit may be revised, revoked, reopened, reissued, or terminated for cause. The filing of a request by the permittee for any permit revision, revocation, reissuance, or termination, or of a notification of a planned change or anticipated noncompliance shall not stay any permit condition. [Material incorporated by reference by 401 KAR 52:040, Section 1a, 4,5]
5. This permit does not convey property rights or exclusive privileges. [Material incorporated by reference by 401 KAR 52:040, Section 1a, 8].
6. Nothing in this permit shall alter or affect the liability of the permittee for any violation of applicable requirements prior to or at the time of permit issuance. [401 KAR 52:040 Section 11(3)]
7. This permit shall be subject to suspension at any time the permittee fails to pay all fees within 90 days after notification as specified in 401 KAR 50:038, Air emissions fee. The permittee shall submit an annual emissions certification pursuant to 401 KAR 52:040, Section 20.
8. All previously issued construction and operating permits are hereby subsumed into this permit.

SECTION C - GENERAL CONDITIONS (CONTINUED)

B. Recordkeeping Requirements

1. Records of all required monitoring data and support information, including calibrations, maintenance records, and original strip chart recordings, and copies of all reports required by the Division for Air Quality, shall be retained by the permittee for a period of at least five years and shall be made available for inspection upon request by any duly authorized representative of the Division for Air Quality. [401 KAR 52:040 Section 3(1)(f)]
2. The permittee shall perform compliance certification and recordkeeping sufficient to assure compliance with the terms and conditions of the permit. Documents, including reports, shall be certified by a responsible official pursuant to 401 KAR 52:040, Section 21.

C. Reporting Requirements

1. a. In accordance with the provisions of 401 KAR 50:055, Section 1 the permittee shall notify the Regional Office listed on the front of this permit concerning startups, shutdowns, or malfunctions as follows:
 - i. When emissions during any planned shutdowns and ensuing startups will exceed the standards notification shall be made no later than three (3) days before the planned shutdown, or immediately following the decision to shut down, if the shutdown is due to events which could not have been foreseen three (3) days before the shutdown.
 - ii. When emissions due to malfunctions, unplanned shutdowns and ensuing startups are or may be in excess of the standards notification shall be made as promptly as possible by telephone (or other electronic media) and shall cause written notice upon request.
- b. The permittee shall promptly report deviations from permit requirements including those attributed to upset conditions (other than emission exceedances covered by Reporting Requirement condition 1 a) above) , the probable cause of the deviation, and corrective or preventive measures taken; to the Regional Office listed on the front of this permit within 30 days. Other deviations from permit requirements shall be included in the semiannual report. [Material incorporated by reference by 401 KAR 52:040, Section 5, 3].
2. The permittee shall furnish information requested by the cabinet to determine if cause exists for modifying, revoking and reissuing, or terminating the permit; or compliance with the permit. [Material incorporated by reference by 401 KAR 52:040, Section 1a, 8].
3. Summary reports of monitoring required by this permit shall be submitted to the Regional Office listed on the front of this permit at least every six (6) months during the life of this permit. For emission units that were still under construction or which had not commenced operation at the end of the 6-month period covered by the report and are subject to monitoring requirements in this permit, the report shall indicate that no monitoring was performed during the previous six months because the emission unit was not in operation.

The summary reports are due January 30th and July 30th of each year. All reports shall be certified by a responsible official pursuant to 401 KAR 52:040, Section 21. All deviations from permit requirements shall be clearly identified in the reports.

SECTION C - GENERAL CONDITIONS (CONTINUED)

D. Inspections

1. In accordance with the requirements of 401 KAR 52:040, Section 3(1)(f) the permittee shall allow authorized representatives of the Cabinet to perform the following during reasonable times:
 - a. Enter upon the premises to inspect any facility, equipment (including air pollution control equipment), practice, or operation;
 - b. To access and copy any records required by the permit;
 - c. Inspect, at reasonable times, any facilities, equipment (including monitoring and pollution control equipment), practices, or operations required by the permit. Reasonable times are defined as during all hours of operation, during normal office hours; or during an emergency.
 - d. Sample or monitor, at reasonable times, substances or parameters to assure compliance with the permit or any applicable requirements.

E. Emergencies/Enforcement Provisions

1. The permittee shall not use as defense in an enforcement action, the contention that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance [Material incorporated by reference by 401 KAR 52:040, Section 1a, 3].
2. An emergency shall constitute an affirmative defense to an action brought for the noncompliance with the technology-based emission limitations if the permittee demonstrates through properly signed contemporaneous operating logs or relevant evidence that:
 - a. An emergency occurred and the permittee can identify the cause of the emergency;
 - b. The permitted facility was at the time being properly operated;
 - c. During an emergency, the permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements in the permit; and
 - d. The permittee notified the Division as promptly as possible and submitted written notice of the emergency to the Division within two working days after the time when emission limitations were exceeded due to the emergency and included a description of the emergency, steps taken to mitigate emissions, and corrective actions taken.
3. Emergency provisions listed in General Condition E.2 are in addition to any emergency or upset provision contained in an applicable requirement.
4. In an enforcement proceeding, the permittee seeking to establish the occurrence of an emergency shall have the burden of proof.

SECTION C - GENERAL CONDITIONS (CONTINUED)

F. Compliance

1. Periodic testing or instrumental or non-instrumental monitoring, which may consist of record keeping, shall be performed to the extent necessary to yield reliable data for purposes of demonstration of continuing compliance with the conditions of this permit. For the purpose of demonstration of continuing compliance, the following guidelines shall be followed:
 - a. Pursuant to 401 KAR 50:055, General compliance requirements, Section 2(5), all air pollution control equipment and all pollution control measures proposed by the application in response to which this permit is issued shall be in place, properly maintained, and in operation at any time an affected facility for which the equipment and measures are designed is operated, except as provided by 401 KAR 50:055, Section 1.
 - b. All the air pollution control systems shall be maintained regularly in accordance with good engineering practices and the recommendations of the respective manufacturers. A log shall be kept of all routine and non routine maintenance performed on each control device.
 - c. A log of the monthly raw material consumption and monthly production rates shall be kept available at the facility. Compliance with the emission limits may be demonstrated by computer program, spread sheets, calculations or performance tests as may be specified by the Division.
2. Pursuant to 401 KAR 52:040, Section 19, the permittee shall certify compliance with the terms and conditions contained in this permit by January 30th of each year, by completing and returning a Compliance Certification Form (DEP 7007CC) (or an approved alternative) to the Regional Office listed on the front of this permit in accordance with the following requirements:
 - a. Identification of the term or condition;
 - b. Compliance status of each term or condition of the permit;
 - c. Whether compliance was continuous or intermittent;
 - d. The method used for determining the compliance status for the source, currently and over the reporting period, and
 - e. For an emissions unit that was still under construction or which has not commenced operation at the end of the 12-month period covered by the annual compliance certification, the permittee shall indicate that the unit is under construction and that compliance with any applicable requirements will be demonstrated within the timeframes specified in the permit.
 - f. The certification shall be postmarked by January 30th of each year. Annual compliance certifications should be mailed to the following addresses:

Division for Air Quality
Frankfort Regional Office
643 Teton Trail Suite B
Frankfort, KY 40601-1403

Division for Air Quality
Central Files
803 Schenkel Lane
Frankfort, KY 40601-1403

3. Permit Shield - A permit shield shall not protect the owner or operator from enforcement actions for violating an applicable requirement prior to or at the time of permit issuance. Compliance with the conditions of this permit shall be considered compliance with all:
 - (a) Applicable requirements that are included and specifically identified in this permit; or
 - (b) Non-applicable requirements expressly identified in this permit.

SECTION C - GENERAL CONDITIONS (CONTINUED)**G. Construction Requirements:**

Emission Points **38, 39** and **40**

1. Pursuant to 401 KAR 52:040, Section 12(3), unless construction is commenced on or before 18 months after the date of issue of this permit, or if construction is commenced and then stopped for any consecutive period of 18 months or more, or is not completed within a reasonable timeframe then the construction and operating authority granted by this permit for those affected facilities for which construction was not completed shall immediately become invalid. Upon a written request, the cabinet may extend these time periods if the source shows good cause.
2. Pursuant to 401 KAR 52:040, Section 12(4)(a) and 401 KAR 59:005, General provisions, Section 3(1), within 30 days following construction commencement, within 15 days following start-up and attainment of maximum production rate, or within 15 days following the issuance date of this permit, whichever is later, the owner and/or operator of the affected facilities specified on this permit shall furnish to the Regional Office listed on the front of this permit, with a copy to the Division's Frankfort Central Office, the following:
 - a. Date when construction commenced, (See General Condition G.1).
 - b. Start-up date of each of the affected facilities listed on this permit.
 - c. Date when maximum production rate was achieved, (See General Condition G.3.b).
3.
 - a. Pursuant to 401 KAR 59:005, General provisions, Section 2(1), this permit shall allow time for the initial start-up, operation of the affected facilities listed herein. However, within 60 days after achieving the maximum production rate at which the affected facilities will be operated, but not later than 180 days after initial start-up of such facilities, the owner or operator shall conduct performance tests and furnish the Division's Frankfort office a written report of the results of such performance tests.
 - b. Pursuant to 401 KAR 59:005, General provisions, Section 3(1)(b), unless notification and justification to the contrary are received by this Division, the date of achieving the maximum production rate at which the affected facilities will be operated shall be deemed to be 30 days after initial start-up.
 - c. Pursuant to Section VII.3 of the policy manual of the Division for Air Quality as referenced by 401 KAR 50:016, Section 1(1), results of performance test(s) required by the permit shall be submitted to the Division by the source or its representative within forty-five days after the completion of the fieldwork.
4. Operation of the affected facilities authorized by this permit shall not commence until compliance with applicable standards specified herein has been demonstrated in accordance with the requirements of 401 KAR 52:040, Section 12(4)(b). Until compliance is demonstrated, the source may only operate for the purpose of demonstrating compliance.

SECTION D - INSIGNIFICANT ACTIVITIES

The following listed activities have been determined to be insignificant activities for this source pursuant to 401 KAR 52:040, Section 6. While these activities are designated as insignificant the permittee shall comply with the applicable regulation and any level of periodic monitoring specified below.

<u>Emission Points</u>	<u>Description</u>	<u>Generally Applicable Regulation</u>
02.	Emergency Generator	None
03	Sigma Blade Flushers	None
04.	Turbulent Mixer	None
06(08)	Carbon Black Silo	401 KAR 59:010
07(09)	Carbon Black Silo	401 KAR 59:010
08	Continuous Flushers	None
09(11A)	Diazo Mix Tank	401 KAR 59:010
10(11B)	Couplant Mix Tank	401 KAR 59:010
11(11C)	Resin Dissolving Tank	401 KAR 59:010
12(11D)	Barium Chloride Tank	401 KAR 59:010
13(11E)	Misc. Solution Tank	401 KAR 59:010
14(11F)	Misc. Solution Tank	401 KAR 59:010
15(11G)	HCL Storage Tank	401 KAR 63:020
17(11)	Head Tanks	401 KAR 63:020
18(11J)	Head Tanks	401 KAR 63:020
19(12)	Carbon Black Holding Tanks	None
20(13)	Carbon Black Batch Mixing	None
22(15)	Pigment Conveying	401 KAR 59:010
24(17)	AZO Blending & Packaging Facility	401 KAR 59:010

SECTION D - INSIGNIFICANT ACTIVITIES

<u>Emission Points</u>	<u>Description</u>	<u>Generally Applicable Regulation</u>
27(23A)	Alkyd Resin Reactor	401 KAR 59:010
28(23C)	Gilsonite Blend Tank	401 KAR 59:010
29(24)	Resin Blend Tank	401 KAR 59:010
30	Carbon Black Premix	401 KAR 59:010
31(25)	Blue Crude Mix Tank	401 KAR 63:020
33(27)	Gilsonite Silo	401 KAR 59:010
34(45)	Sodium Carbonate Silo	401 KAR 59:010
35(37)	AZO Intermediate Hopper	401 KAR 59:010
36(43)	Blue Dispersion- Blue Crude	401 KAR 59:010
37	Other Storage Tanks	401 KAR 59:010
38	Sodium Chloride Storage Tank	401 KAR 59:010
39	Hydrochloric Acid Storage Tank	401 KAR 63:020
40	Ferric Sulfate Storage Tank	401 KAR 59:010